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ABSTRACT

Psychology and Population is defined as the study of individual dispositions and behavior that affect the size, structure and dispersion of the population, and the way in which acts of individuals enter into the dynamics of population change. Even this definition was viewed as inadequate, ignoring, as it does, the reciprocal effect of population on individuals. The author proposes a framework of relationships between the individual and society. Within this framework, he focuses on the causes of human fertility, which refers to the number of live births in a population, not to the capacity to bear children. The urgency of the population problem is stressed as the factor which should motivate psychologists to assist in researching the myriad questions which a focus on Psychology and Population raises. Many of these questions are included, and significant research beginnings cited. (TL)

Psychology and Population: An Overview*

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The issues that fall under the rubric, "Psychology and Population", are enormously complex and we are just beginning to grapple with them. In today's session, perhaps the best we can hope for is to gain some appreciation of the nature of the issues that confront us.

We might try to define Psychology and Population as the study of individual dispositions and behaviors that affect the size, structure and dispersion of a population, and the way in which acts of individuals enter into the dynamics of population change. But even that broad definition would be too limited, because it treats psychological variables only as determinants and ignores the effects of population on individuals. When we speak of psychology and population, we are facing the difficult problem of dealing with different levels of conceptualization, attempting to build bridges between an approach that focuses on individuals and an approach that focuses on aggregates. We are speaking, in broad terms, of relationships between the individual and society; within that framework, however, we can concentrate on two specific topics: fertility and

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urbanization. Why do people have children, or a certain number of children, and what are the effects of family size on parents and children? What are the motivational factors in urbanization and how are individual dispositions and interpersonal behaviors affected by urban life and crowding? In my view, psychologists concerned about population problems can make their greatest contributions by focusing on these areas. In the present paper, I will deal mainly with the first topic, fertility, and will be concerned more with causes than consequences.

Population growth results from the difference between fertility and mortality, assuming no significant amount of migration. In most of the world, birth rates are higher than death rates, so total population is increasing. The worldwide rate of growth is 2%, which does not seem high but in fact produces a doubling of population size every 35 years. In the developing nations, where death rates are declining and birth rates remain high, growth rates of 3% or more are common, resulting in a doubling of the population every 20-25 years. In the United States, with a growth rate of only 1%, our current population of more than 200 million will double in 70 years, if the growth rate is not reduced.

It is possible to argue about the degree of urgency for reducing population growth rates, but, given a finite amount of space and resources, there can be no debate about the ultimate necessity for curbing population growth. And, apart from the question of long-term survival, a persuasive case can be made for reducing growth rates (or even reducing <u>current</u> population <u>size</u>) to enhance the qualitative aspects of human life. "Quality of life" means different things to different people, but it is interesting to note that population growth can be seen as an impeding factor in the attainment of "quality" by almost any definition. The detrimental effects of population growth have come

to be widely recognized, as evidenced by declarations and policy statements issued by the U.N. and by many governments and national leaders, including the last three Presidents of the United States. But how is population growth to be reduced? Putting aside the possibility of an increase in the death rate through war or disease, population growth must be reduced by lowering the birth rate. Women must bear, on the average, fewer children. Of course, the shape of the distribution of childbearing can vary to achieve the same average value. If many women opt to have no children, others can have large families. But regardless of whether the reduction in fertility is spread evenly or unevenly among the population, the basic point remains: fertility must come down in order to halt population growth.

My topic, then, is fertility (which refers to the number of live births in a population in a given time period, not to the capacity to bear children) and I will focus on the causes of human fertility. Brewster Smith (1965) has written that, "The fertility of a population can be viewed as the resultant of many individual acts and decisions, made within a framework of biological and environmental constraints." Let us take that useful statement as a starting point.

The "individual acts and decisions" that affect fertility are central human events: the selection (or non-selection) of a mate; the frequency of sexual relations; the use or non-use of contraception and abortion; the decision (or lack of decisions) about number of children in the family and the spacing of births. While Smith quite properly describes these as <u>individual</u> acts or decisions, the stark fact is that they have seldom been studied as such by social scientists concerned with population matters. Most research in the population field has been conducted from a sociological or demographic perspective, focusing on aggregates rather than individuals. It is not my intention to criticize that approach; quite the contrary, I believe that the research by demographers and sociologists has provided more useful information about fertility than could

have been obtained through a comparable amount of effort by psychologists. Social stratification variables, such as education and religion, show meaningful relationships with fertility. However, these variables tell us little about the why of human fertility and, in statistical terms, they leave a lot of the variance in fertility unexplained. Knowledge is needed about the motivational factors in childbearing decisions and about the diverse psychological mechanisms that intervene between stratification variables and fertility outcomes. Different levels of conceptualization are essential in the study of behavior as complex as fertility; the psychological approach, focusing on individuals, has so far been neglected.

To return to Smith's statement, he speaks of individual acts and decisions being made "within a framework of biological and environmental constraints". One important task for psychologists is to delineate the perceived constraints of the social environment, that is, the perceptions of individuals about their freedom to make childbearing choices. We know little, for instance, about subjective perceptions of social sanctions against childlessness, or about the precise ways in which female role expectations influence fertility. In subjective terms, what are the factors that cause most people to choose marriage over non-marriage and children over childlessness? Studies on topics such as these can provide a bridge between the sociological and psychological levels of analysis.

It is important to note, too, that there are limited means by which either social or psychological variables can affect fertility. Davis & Blake (1956) have provided an exhaustive list of "intermediate variables" affecting fertility, classified within three general categories: intercourse variables, conception variables and gestation variables. I think it is worthwhile to run quickly through their list, keeping in mind that fertility can be affected only

through modification of one or more of these intermediate variables.

The intercourse variables include three governing the formation and dissolution of reproductive unions (age of entry into sexual unions, time spent after or between unions, extent of permanent celibacy) and three governing exposure to intercourse within unions (voluntary abstinence, involuntary abstinence, coital frequency).

The conception variables include involuntary fecundity or infecundity (fecundity is defined as the physiological capacity to bear children), use or non-use of contraception, and voluntary fecundity or infecundity (e.g., medical treatment, sterilization).

The gestation variables are involuntary foetal mortality and voluntary foetal mortality (abortion).

Ronald Freedman, in a monograph on "The Sociology of Human Fertility" (1961-1962), has analyzed ways in which social norms and aspects of social organization operate through the intermediate variables to influence fertility. This kind of conceptual analysis provides a very useful framework for psychological studies in population.

With these general remarks as background, I would like to turn now to a discussion of some specific research findings and research needs. I can touch upon only a few topics here, because of time limitations; more extensive reviews are available elsewhere (Fawcett, 1970; Pohlman, 1969).

There is in the population field a very substantial body of fertility research based on survey interview techniques, much of which deals with variables that are explicitly psychological (or socio-psychological) in content. Attitudes toward contraception are frequently measured, for instance, as are family size preferences. Some studies have attempted to assess the relationship between fertility and personality variables, such as need for nurture, planfulness,

anxiety, cooperativeness, and tolerance of ambiguity. Concepts such as mobility, religiousness, marital adjustment and conjugal role relationships have also been studied, all in relation to fertility. It must be noted, however, that measurement techniques have been crude, especially for attitudes and personality characteristics, and that analyses have not generally been conducted from the perspective of intra-individual dynamics. Correlational methods have been widely used to identify variables or clusters of variables that co-vary with desired or actual family size. Few studies have attempted more complex methods of analysis, such as the use of moderator variables to study interactions. Most studies have been based upon an assumption of linearity of relationships and have treated social and psychological variables equivalently.

A series of such fertility surveys have been carried out in the U.S., beginning with the Indianapolis Study in 1941. More recent efforts, all conducted since 1955, include the Growth of American Families Study, the National Fertility Survey and the Princeton Study.[1] Outside the U.S., major projects based on surveys have been carried out in Jamaica, Puerto Rico, Taiwan and Malaysia.[2] (I have excluded from this list many fertility surveys in the developing countries where results have been reported only partially in terms of rudimentary analyses. Most of the studies that I have cited are reported in detail in separate volumes.)

From these surveys (and from other research) has emerged a picture of the social and cultural differences that influence fertility. Education, religion and work status of females are major factors affecting fertility. Rural residence,

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[1] See, for example: Whelpton & Kiser, 1946-1958; Freedman, Whelpton & Campbell, 1959; Whelpton, Campbell & Patterson, 1966; Westoff & Ryder, 1969; Westoff, Potter, Sagi & Mishler, 1961; Westoff, Potter & Sagi, 1963.

[2] See, for example: Stycos & Back, 1964; Hill, Stycos & Back, 1959; Freedman & Takeshita, 1969; National Family Planning Board of Malaysia, 1968.

rural background and size of the family in which parents were themselves raised have also been shown to be related to fertility differences. As mentioned earlier, however, none of these variables (nor any combination of them) accounts for a very large amount of the fertility variance in a correlational analysis, even in longitudinal studies. And personality measures have shown virtually no correlation with fertility. In view of the obvious complexity of the event that is being studied, this should not be surprising, nor even discouraging. But it does point out the chalienge of work in this area and the need to apply new approaches to the understanding of human fertility.

A great deal of psychological work is needed pertaining to one basic question: why do people want children? It is remarkable that we know so little about this central aspect of human existence. Apart from the psychoanalytic tradition, only a few psychologists have studied motivations for childbearing. A systematic effort is needed to assess the values attached to children, or the functions served by children, for various subgroups of society and for different societies. That kind of research, dealing with both positive and negative values or functions, would be an important beginning and it is surely an area where the methodological skills of psychologists would be useful.

In a more dynamic context, research should be done on the process of decision-making, with reference to decisions about number of children. We need to know, first of all, the extent to which a rational decision-making framework is relevant. As Lee Rainwater (1960) has pointed out, "One who exercises the choice to do nothing at all, to plan only in the negative sense, is quite likely to become a parent." In cases where decisions are made (or at least attempted), we need to know the relative salience of different kinds of variables. That brings us back, in part, to the value and function of children. It also raises questions about the dynamics of interpersonal behavior, mainly between husband

and wife, with specific emphasis on sexual behavior.

A somewhat different approach can be taken by focusing on attitudes toward methods of birth control, including abortion, viewing attitudes within a motivational context. Contraception and abortion are the major means by which family limitation is achieved and we have only limited understanding of the attitudinal and personality factors related to their use. Diverse psychological theories and assessment methods could usefully be employed in studies of attitudes toward birth control.

I would reiterate that psychological research on fertility should be conducted within the framework of what is currently known from socio-demographic studies. An important task, as I see it, is to explain how variables such as education and religion affect individual traits or life styles that, in combination with situational factors, influence fertility. It seems strategically wise to begin with what is already known about fertility and to work in directions that will permit data from different disciplines to be complementary.

My emphasis so far has been on what we do not know about the psychological determinants of human fertility. That stress is proper, I think, because our ignorance in this area greatly exceeds our knowledge. I want to end on a brighter note, however, by mentioning a few psychological research efforts that seem to me very promising.

In a recent paper on "Psychology and Population", I made the following observation:

> For psychologists, perhaps the most interesting and provocative studies in the population field are those conducted by Rainwater (1960, 1965). Using intensive interview techniques, Rainwater studied conjugal role relationships and patterns of sexual behavior in lower and middle class urban Americans and related these variables to family size preferences and contraceptive practices. The results are presented with a socio-psychological perspective, emphasizing the meaning for the individual of sex, marriage, contraception, and children. It is this focus on the individual's perceptions, motivations, and constraints that distinguishes Rainwater's work from most other studies in the population field.

The exploratory research carried out by Rainwater provides a rich variety of hypotheses that might be tested in more controlled studies on psychological aspects of fertility and family planning in the United States.

In the area of attitudinal research, two recent studies have demonstrated the insights that can be gained by the combined application of a theoretical orientation and a fairly elaborate analytical approach. One study was carried out in North Carolina (Insko, Blake, Cialdini & Mulaik, in press) and one in Chicago (Crawford, Stocker & Heredia, 1968). Both studies were guided by an expectancy X value theoretical framework, both focused on attitudes toward birth control, both compared black and white respondents, and both attempted to derive practical implications from their data. The results and conclusions of the two studies were similar in many respects. They both conclude, for instance, that family planning programs should first stress the <u>efficacy</u> of current contraceptive methods for preventing births, then should strengthen the cognitive linkages between birth prevention and attainment of valued goals.

With respect to personality studies, Judith Bardwick and her associates at Michigan are doing research on the use of oral contraceptives, obtaining data from both clinical interviews and standardized tests. Rodgers and Ziegler have published a series of good assessment studies on psychological reactions to vasectomy (e.g., Rodgers, Ziegler, Altrocchi & Levy, 1965). Rabin and Greene (1968) used data from sentence completion tests to construct an objective instrument for measuring "motivations for parenthood". The Internal-External Control scale has been shown to differentiate levels of contraceptive practice among unmarried women (MacDonald, 1970), and additional studies using that instrument are planned.

These studies, although few in number and mainly exploratory in nature, seem to me important in indicating some future research directions.

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My assigment was to provide an overview of psychology and population, but I have not been able to do so. The time was too short, and many topics have been omitted. I have not discussed the relevance of studies of modernity, for instance, nor the applications of communications theory and incentive-motivation concepts to family planning programs. I spent some time discussing the causes of human fertility, but none at all on the psychological consequences of family size and population density. I omitted any discussion of the relevance of psychological studies for formulation of population policies, for example, studies of the female sex role and the gratifications derived from motherhood in relation to alternative sources of gratification.

I hope, however, that I have said enough to demonstrate that there is something happening in the area of psychology and population, and to convince you that what is happening is important. It is important in two ways. The problem of population growth is so urgent and so complex that psychologists, along with other scientists, should feel morally compelled to contribute to its solution. And the psychological issues raised in connection with population, having to do with topics such as marriage, sex, contraception, childbirth and family size, are so basic that an understanding of them is essential for a complete science of human behavior.

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